

Flight Scientist Report
Tuesday 08/25/2020 ACTIVATE RF27

Flight Type: Statistical Survey Flight – ZIBUT to northeast point
Flight Route: KLFY ATLIC OUTES ZIBUT 37.8/-69.8 38.14/-69.96 37.8/-69.8 ZIBUT OUTES
ATLIC KLFY KFAF KLFY (made an audible in flight though to change the principal plane leg)

Special Notes:

HU-25 cabin temperature very high

Today a bit unique thus far in summer flights in that there wasn't much cloud vertical development

Well defined inversion around 1000 ft at takeoff and a strong signal of SO₄ above the inversion base; saw it on the way back as well during the clear ensembles (~1500-3500 ft; didn't mix to surface)

HSRL-2 observed aerosol layers around 8-12 km.

King Air

Instruments worked, even GoPro camera.

6 sondes

Falcon

3.5 cloudy ensembles, 3 clear ensembles

Clouds were patchy with hardly much time in them.

Eddie: heat on board is the issue; ufcpc is hurting the most

Camera worked well

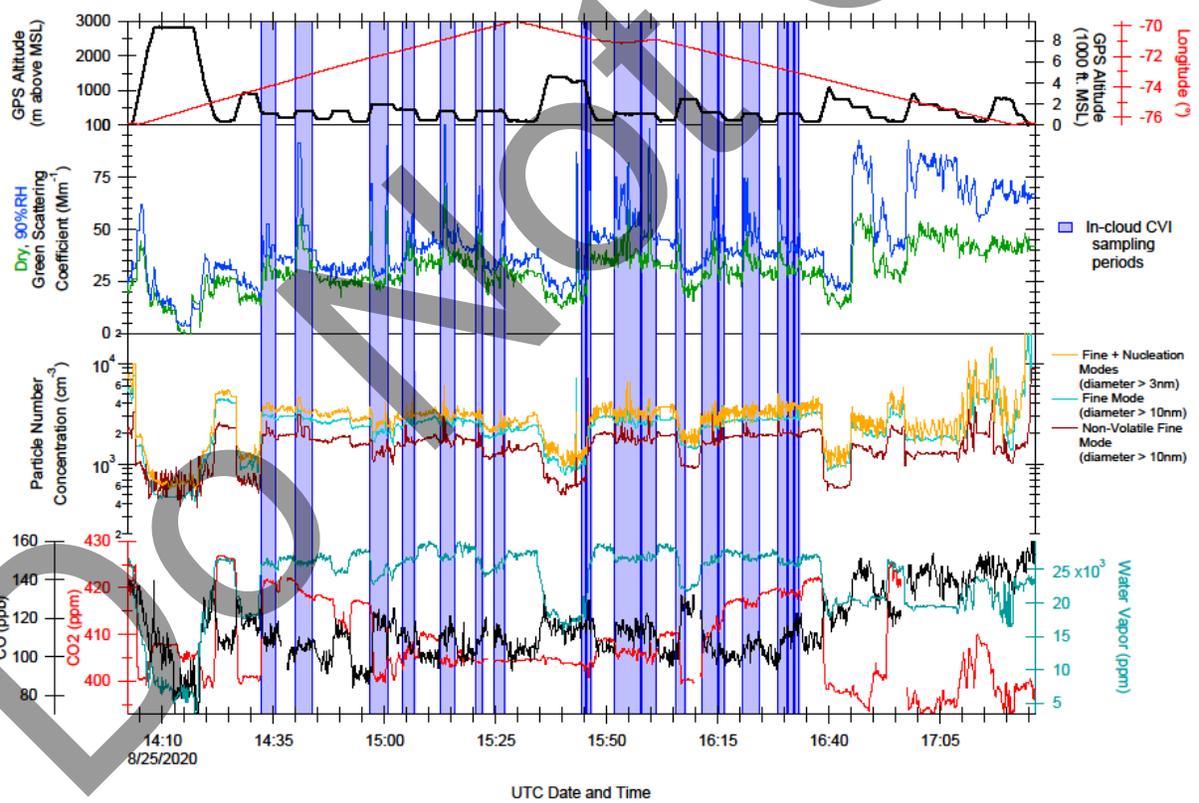
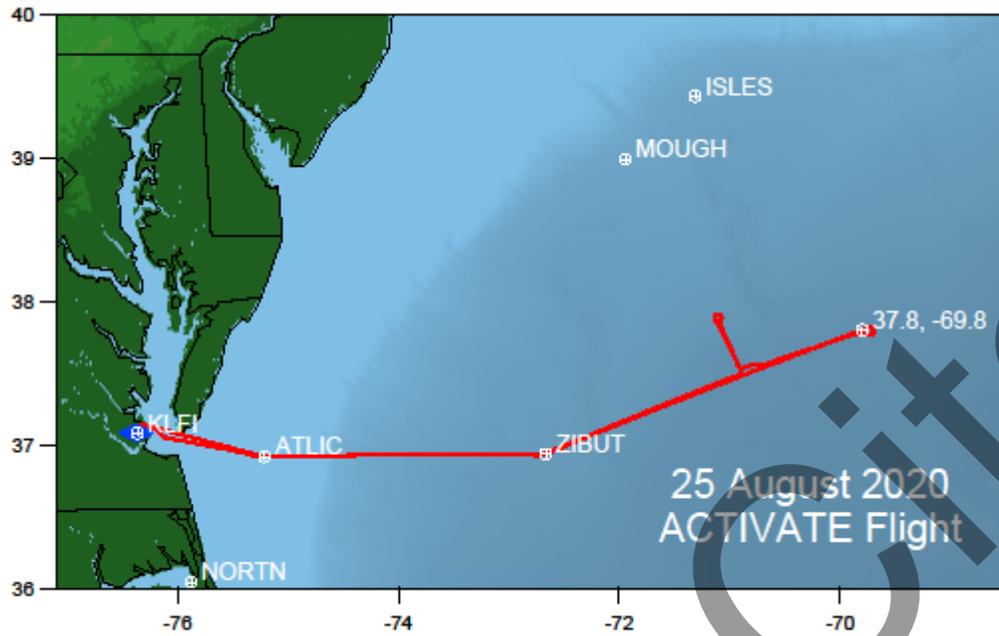
Made a few changes to the nephelometer to improve it and it was a bit better today

Ewan: no instrument issues

No cloud water since clouds aren't very juicy

Hit a "sulfate volcano" on way back to coast

Rich Moore Quicklook Images:





Do Not Cite!

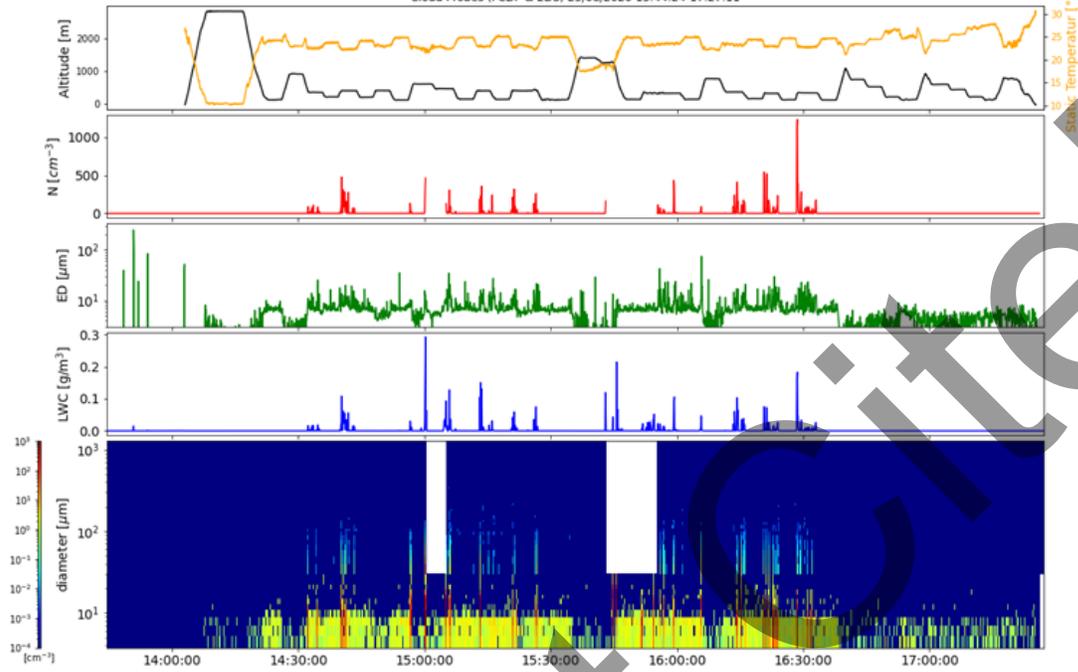
Quicklook ACTIVATE Cloud Probes (FCDP & 2DS)

preliminary data, only for quicklook use

Simon Kirschler, Raphael Märkl, Christiane Voigt, Richard Moore, Ewan Crosbie



Cloud Probes (FCDP & 2DS) 25/08/2020 13:44:24-17:27:11



Simon.Kirschler@dlr.de, Raphael.Maerkl@dlr.de, Christiane.Voigt@dlr.de, richard.h.moore@nasa.gov, ewan.c.crosbie@nasa.gov

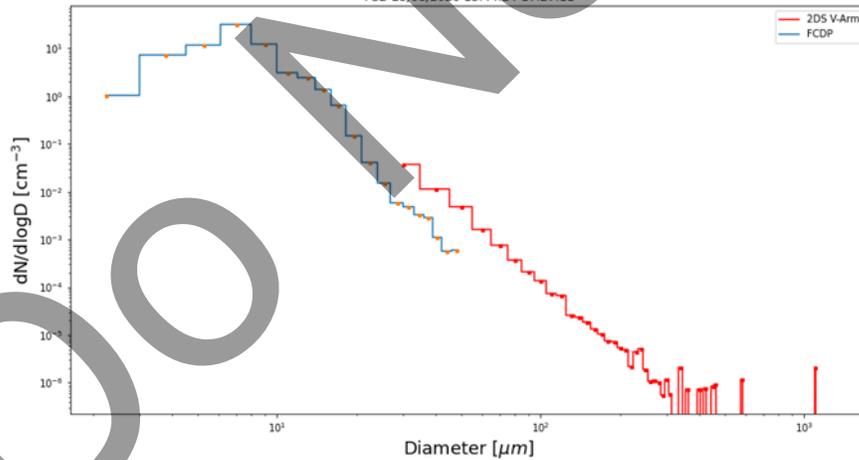
PSD ACTIVATE

preliminary data, only for quicklook use

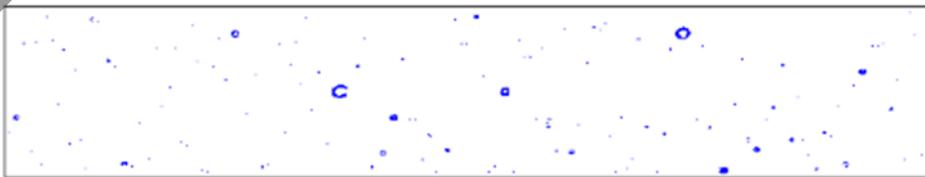
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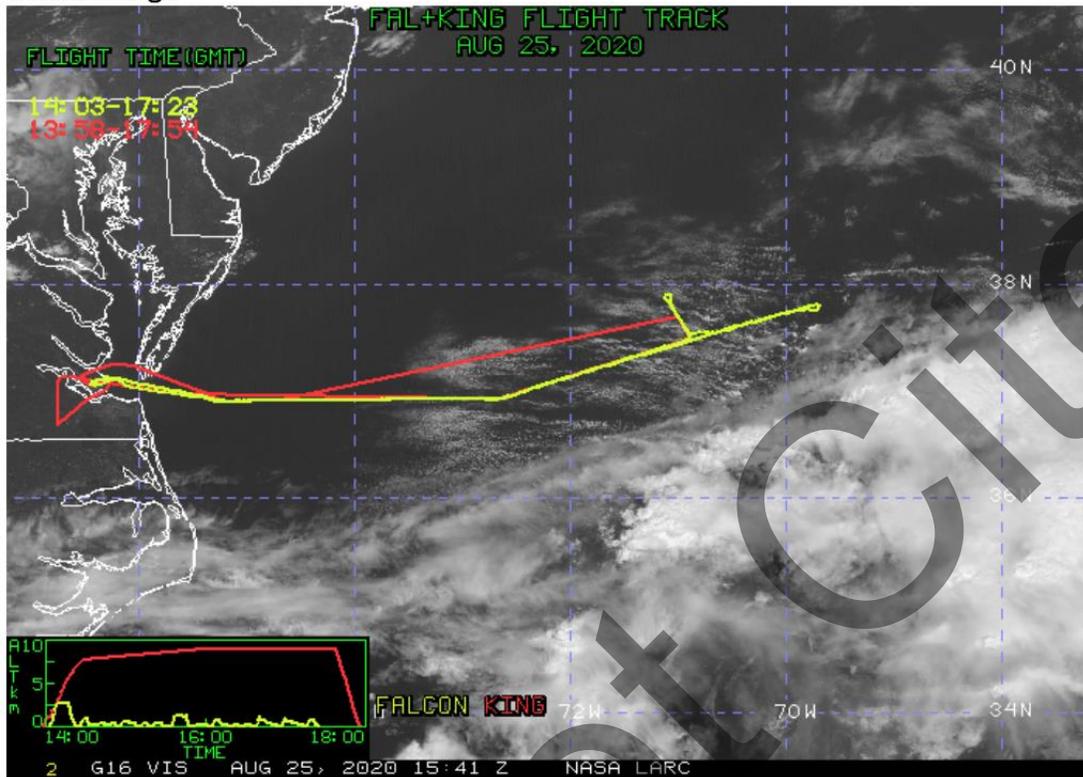
PSD 25/08/2020 13:44:24-17:27:11



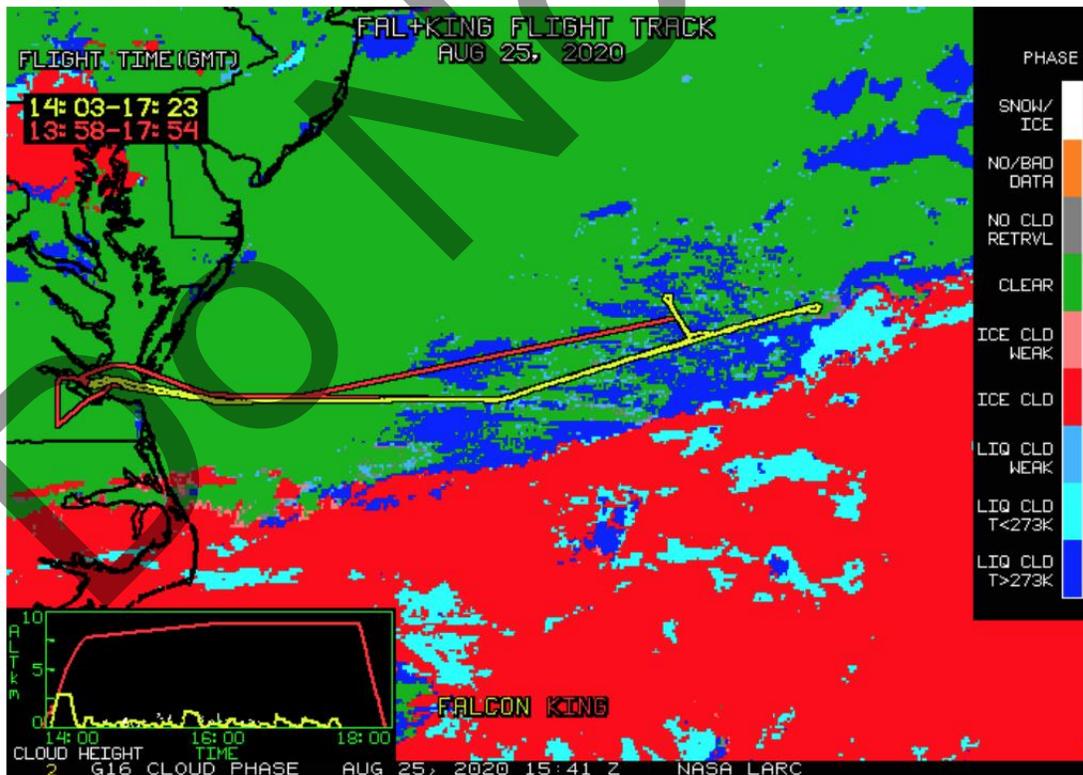
Simon.Kirschler@dlr.de, Raphael.Maerkl@dlr.de, Christiane.Voigt@dlr.de, richard.h.moore@nasa.gov, ewan.c.crosbie@nasa.gov



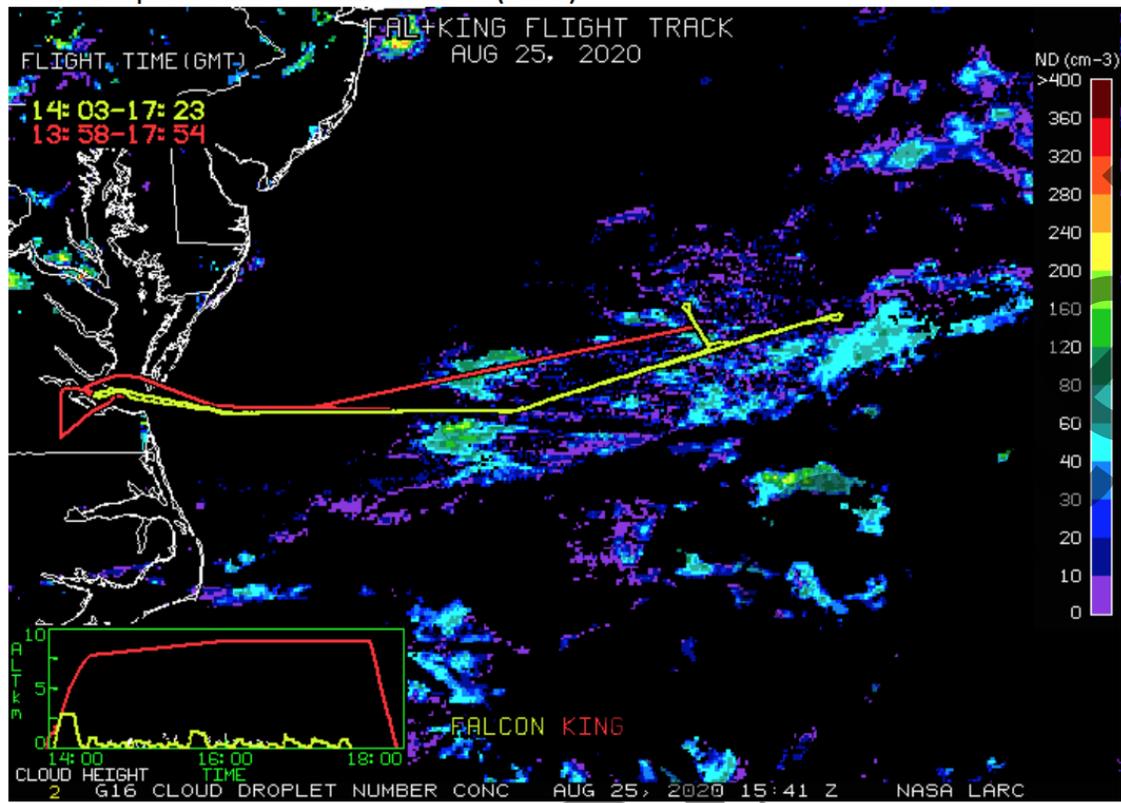
NASA-LaRC Clouds Group GOES-16 Quicklook Images for Flight 27, 15:41 UTC Aug 25, 2020
Visible Image



Cloud Phase



Cloud Droplet Number Concentration (cm-3)



Cloud-Top Height (Kft-ASL)

